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EXAMINER

LEE, ANDREW CHUNG CHEUNG

ART UNIT

PAPER NUMBER

2419

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/751,848	Applicant(s) PARK ET AL.	
	Examiner Andrew C. Lee	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-33 and 36-59 is/are pending in the application.
- 4a) Of the above claim(s) 3,4,34 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,7-12,15-18,21-33,38-43,46-49 and 52-59 is/are rejected.
- 7) ☒ Claim(s) 5,6,13,14,19,20,36,37,44,45,50 and 51 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Claims 1 - 2, 5 - 33, 36 - 59 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 7 – 12, 15 – 18, 21 – 33, 38 – 43, 46 – 49, 52 – 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ludwig (US 6,697,352 B1) and Tomlins (US 6618383 B1) in view of Zhu (US 6,154,780).

Regarding Claims 1, 2, 32, 33, Ludwig discloses of a method, a computer-readable recording medium having embodied thereon a computer program for performing a method (*Fig. 8, col. 11, lines 22- 40*) of transmitting a bit stream in a communication *network* (*"generating data packets (as a bit stream) to be sent out having a first data structure determined by a first predetermined protocol"* correlates to a *method of transmitting a bit stream in a communication network; col. 5, lines 26 – 36*), the method comprising: (b) adding a header from each communication protocol layer to a payload while transmitting the bit stream coded in the step of to each communication protocol layer (*"passing data through the layers"* correlates to *adding a header from each communication protocol layer to a payload; Fig 5, col. 2, lines 10 – 33, column 17, lines 4 – 15*); and, wherein in operation (c), a bit stream, to which header information

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has been added by undergoing each communication protocol layer (*“passing data through the layers” correlates to header information has been added by undergoing each communication protocol layer; Fig 5, col. 2, lines 10 – 33, col. 17, lines 4 – 15*) is transmitted in an unacknowledged mode protocol (*“no unacknowledged numbered mode packets is allowed to be outstanding” correlates to a bit stream is transmitted in an unacknowledged mode protocol; col. 15, lines 50 – 56*), and only the header information in the bit stream is transmitted in an acknowledged mode protocol (*“by means of acknowledgement messages” correlates to header information in the bit stream is transmitted in an acknowledged mode protocol; col. 4, lines 13 – 22, Fig. 5, col. 14, lines 66 – 67*).

Ludwig does not disclose transmitting, from the first terminal to the second terminal, the header separately from the bit stream and only the header information in the bit stream is separately transmitted.

Tomlins in the same field of endeavor teaches transmitting, from the first terminal to the second terminal, the header separately from the bit stream and only the header information in the bit stream is separately *transmitted (“transmitting said payload and control information in parallel over separate serial lines” interpreted as transmitting, from the first terminal to the second terminal, the header separately from the bit stream and only the header information in the bit stream is separately transmitted; col. 2, lines 51 – 62, Fig. 2, Fig. 7)*.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Ludwig to include the features of

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transmitting, from the first terminal to the second terminal, the header separately from the bit stream and only the header information in the bit stream is separately transmitted as taught by Tomlins in order to provide an interface arranged to convey variable length voice and data information packets between processing devices in an asynchronous adaptation arrangement as suggested by Tomlins (*see col. 3, lines 3 – 9*).

Neither Ludwig nor Tomlins disclose explicitly (a) coding source data into the bit stream using a predetermined type of coding.

Zhu in the same field of endeavor discloses the limitation of (a) coding source data into the bit stream using a predetermined type of coding (*col. 1, lines 33-34 — using H.263 representing a picture in an encoded video bitstream*). Therefore, it would have been obvious to modify both Ludwig and Tomlins to include coding source data into the bit stream using a predetermined type of coding as that taught by Zhu in order to create a flexible bitstream that may be efficiently packetized for a variety of transport protocols (*as suggested by Zhu, see col. 3, lines 26 – 27*).

Regarding claims 7, 8, 9, 38, 39, 40, Ludwig discloses the header information in the bit stream be simultaneously transmitted in an acknowledged mode protocol with the bit stream (col. 14, lines 66-67). He also teaches that the header information in the bit stream is simultaneously transmitted in an acknowledged mode protocol with the payload (col. 15, lines 6-12). And the header information in the bit stream is simultaneously transmitted in the unacknowledged mode protocol with the bit stream (col. 14, lines 62-64).

Regarding claims 10, 41, Ludwig discloses that as a transmission error occurs, the bit stream, to which headers have been added by undergoing each communication protocol layer, is re-transmitted in an acknowledged or unacknowledged mode protocol (*“protocol provides a numbered reliability mode and an unnumbered reliability mode” as each communication protocol layer, is re-transmitted in an acknowledged or unacknowledged mode protocol; col.11, lines 48-57*).

Regarding Claims 11,12, 15, 16, 42, 43, 46, 47, Ludwig teaches the acknowledged mode protocol being a transmission control protocol (TCP), and the unacknowledged mode protocol being a user datagram protocol (UDP) (*“by means of acknowledgement messages” as header information in the bit stream is transmitted in an acknowledged mode protocol; col. 4, lines 13 – 22, Fig. 5, col. 14, lines 66 – 67, Col. 6, lines 24-26; lines 35-37; col. 11, lines 48-57, Fig 9a and 9b*).

Regarding Claims 17, 18, 21, 22, 23, 24 and 48, 49, 52, 53, 54, 55, Ludwig discloses the limitations of the acknowledged mode retransmitting Internet Protocol (IP) or Radio Link Protocol (RLP) packets (*“acknowledgment packages” as acknowledged mode retransmitting; Col. 11, lines 50-57; “RLP packets of the numbered mode that are to be retransmitted” as Radio Link Protocol (RLP); col. 13, lines 60-63*).

Regarding Claims 25, 26, 56, 57, Ludwig discloses the limitations of the headers are a payload header, a real time protocol (RTP) header, a user datagram protocol (UDP) or transmission control protocol (TCP) header, an Internet protocol (IP) header, a radio link protocol (RLP) header, and a layer 2 (L2) header, which are added after a bit stream is passed through each layer (*col. 6, lines 15-26, Fig.5 and Fig.6*)

Regarding claims 27, 28, 58, 59, Ludwig discloses the payload includes multimedia data (*“real-time data streams” as payload includes multimedia data; col. 6, lines 60-65; col. 17, lines 18-19*).

Regarding Claim 29, Ludwig discloses adding the header of each communication protocol layer to a payload while transmitting the bit stream encoded by the encoder to each communication protocol layer (*“passing data through the layers” as adding the header of each communication protocol layer to a payload; Fig. 5, col. 2, lines 10 – 32*); and a packet processing unit for transmitting the bit stream processed by the protocol processing unit in an unacknowledged mode protocol (*col. 6, lines 25 – 26; lines 34 – 37*) and transmitting the header information in an unacknowledged or acknowledged mode protocol (*Fig 5, col. 6, lines 26 – 27; col. 12, lines 33 – 34*).

Both Ludwig and Tomlins do not disclose an encoder for encoding source data into a bit stream.

Zhu in the same field of endeavor teaches an encoder for encoding source data into a bit stream (*“ an encoder/decoder (codec) as an encoder for encoding source data; col. 6, lines 10-14, Fig 5; lines 5-9*). Therefore, it would have been obvious to modify Both Ludwig and Tomlins to include an encoder for encoding source data into a bit stream such as that taught by Zhu in order to create a flexible bitstream that may be efficiently packetized for a variety of transport protocols as suggested by Zhu (*see col. 3, lines 26 – 27*).

Regarding Claims 30 and 31, Ludwig disclose the system for relaying and receiving a bit stream in a communication network (*Fig 6*), the system comprising an

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extractor for separately extracting payloads and header information, which corresponds to the header of each layer (*Fig. 8; col. 9, lines 61 – 65*), while transmitting a bit stream received in a separate transmission protocol in the communication network to each layer (col. 10, lines 33 – 36); an error determination processing unit for determining whether the header information extracted by the extractor has error (*col. 10, lines 20-27, col. 16, lines 24 – 34*); a bit stream re-organizing unit for re-organizing a bit stream using the header information extracted by the extractor; and a decoder for decoding a bit stream re-organized by the bit stream re-organizing unit (col. 14, lines 46-51). He also teaches the system having the error determination processing unit also requests re-transmission if it is determined that the header information has error (col. 13, lines 2-7), an extractor for separately extracting payloads and header information, which corresponds to the header of each layer (col. 9, lines 61-65), while transmitting a bit stream received in a separate transmission protocol in the communication network to each layer (col. 10, lines 33-36); wherein only the header information in the bit stream is transmitted in an acknowledged mode protocol (recited “by means of acknowledgement messages” correlates to header information in the bit stream is transmitted in an acknowledged mode protocol; col. 4, lines 13 – 22, Fig. 5, col. 14, lines 66 – 67). However, Ludwig et al. also disclose receiving a bit stream and a header information received in an acknowledged or unacknowledged mode protocol in the communication network to each layer (*by means of acknowledgement messages” correlates to header information in the bit stream is transmitted in an acknowledged mode protocol; col. 4, lines 13 – 22, Fig. 5, col. 14, lines 66 – 67*).

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Ludwig et al. do not disclose explicitly separately extracting payloads and header information.

Tomlins in the same field of endeavor teaches separately extracting payloads and header information (“can transmit the protocol header and data as separate blocks” Fig. 19, col. 13, lines 50 – 67, col. 14, lines 1 – 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ludwig to include separately extracting payloads and header information as taught by Tomlins in order to provide a control system for the peripheral component interconnect bus as suggested by Tomlins (*see col. 1, lines 9 – 11*).

Response to Arguments

4. Applicant's arguments filed on 10/10/2008 with respect to claims 1 – 2, 5 – 33, 36 – 59 have been fully considered but they are not persuasive.

Regarding claim 1, applicant argues “Applicant submits that the portion of Tomlins cited by the Examiner does not support the Examiner's purported reason for combining the references. In particular, the portion of Tomlins cited by the Examiner merely teaches that variable length voice and data information packets may be conveyed over an interface in an asynchronous adaptation arrangement, wherein the voice and data information packets are conveyed in a serial manner within micro-packets whereby to obviate the use of null or padding data. See Tomlins at col. 3, lines 3-9. Neither this portion of Tomlins, nor the Examiner, provides any rationale as to how

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transmitting the header separately from the bit stream allows for the transmission of variable length voice and data information packets between processing devices in an asynchronous adaptation arrangement. Examiner respectfully disagrees. The portion recited by the applicant taught away from the limitations as disclosed.

Examiner contends reference Tomlins teaches transmitting, from the first terminal to the second terminal, the header separately from the bit stream and only the header information in the bit stream is separately transmitted. Examiner interpreted transmitting, from the first terminal to the second terminal, the header separately from the bit stream and only the header information in the bit stream is separately transmitted as transmitting said payload (which is interpreted as bit streams) and control information (header) in parallel over separate serial lines, see Tomlin *lines 51 – 62*. One picture is worth a thousand words. Fig. 2 and Fig 7 indicates clearly payload/bit streams and control information/header are transmitted separately, see Tomlins, col. 7, lines 20 – 31.

Regarding claims 5, 6, 36, 37, applicant's argument is persuasive. The rejection of claims 5, 6, 36, 37 under 35 U.S.C. 103(a) as being unpatentable over Ludwig (US 6,697,352 B1) and Tomlins (US 6618383 B1) in view of Zhu (US 6,154,780) is hence withdrawn.

Allowable Subject Matter

5. Claims 5, 13, 19, 6, 14, 20, 36, 44, 50, 37, 45, 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in

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independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Le (US 6466585 B1).
- Jonsson et al. (US 6700888 B1).
- Le (US 6680955 B1).

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew C Lee/
Examiner, Art Unit 2419
<1/19/2009:2Qy09>

/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2419